

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 02-214165

(43)Date of publication of application : 27.08.1990

(51)Int.Cl.

H01L 29/784

(21)Application number : 01-034407

(71)Applicant : TOSHIBA CORP

(22)Date of filing : 14.02.1989

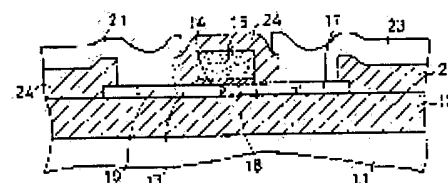
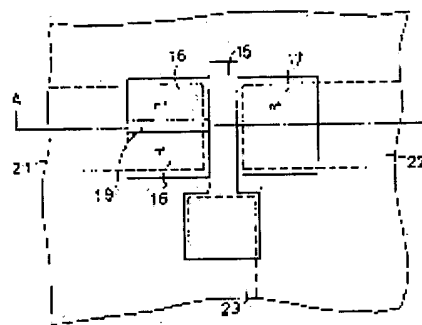
(72)Inventor : HAMAZAKI TOSHIHIKO

## (54) SEMICONDUCTOR DEVICE

### (57)Abstract:

**PURPOSE:** To improve drain breakdown voltage and speed up operation by providing a region which is of the same conductive type as a channel region within a source region of MOS transistor formed on a thin SOI film so that it may contact a channel part.

**CONSTITUTION:** A p-type single crystal silicon layer (SOI film) 13 is formed through an SiO<sub>2</sub> film 12 on a substrate 11, n+ type source/drain regions 16 and 17 are provided sandwiching a channel region 18 below a gate electrode 15 within the silicon film 13, and a p-type region 19 which is of the same as the channel region 18 is provided within the channel region 16 being in contact with the channel region 18 in the direction of channel. Thus, a positive hole generated by impact ionization near the drain region 17 is not accumulated between the source and channel but emitted to the outside of channel through the p-type region 19, thus improving drain breakdown voltage and speeding up operation.



## LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's

decision of rejection]

[Date of extinction of right]

Copyright (C); 1998,2000 Japan Patent Office